



**TOWN OF MERRIMAC  
INSPECTIONAL SERVICES  
2 School Street, Merrimac, MA. 01860  
(978) 346-0525**

**Massachusetts Residential IECC Energy Performance Testing Certificate**

House Address: \_\_\_\_\_ Permit #: \_\_\_\_\_ Date: \_\_\_\_\_  
Permit holder: \_\_\_\_\_ Phone: \_\_\_\_\_

**I. Building Envelope Air Leakage (mandatory):**

**Blower door test (Mandatory)**

Testing company: \_\_\_\_\_ Phone: \_\_\_\_\_

Tester Name (print): \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

BPI or HERS Rater certification number: BPI no: \_\_\_\_\_ HERS Rater no: \_\_\_\_\_

**Test Result:**

Fan Flow at 50 Pascals = \_\_\_\_\_ CFM50      Total Conditioned Volume = \_\_\_\_\_ ft<sup>3</sup>

ACH50 = CFM50 x 60 / Volume = \_\_\_\_\_ ACH50 (must be ≤ 3.0 ACH50)

**Visual Inspection (Mandatory)**

- Air Barrier and Insulation Installation checklist completed, signed and included with this certificate.

**II. Heating and Cooling System Duct Leakage**

- All portions of the ducts are located entirely within the building thermal envelope. Testing is not required\*.

**Duct leakage test**

Testing company: \_\_\_\_\_ Phone: \_\_\_\_\_

Tester Name (print): \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

BPI or HERS Rater certification number: BPI no: \_\_\_\_\_ HERS Rater no: \_\_\_\_\_

Total duct leakage test (choose 1):

- Rough-in w/ air handler (must be ≤ 4.0 CFM/100 ft<sup>2</sup>)       Rough-in w/o air handler (must be ≤ 3.0 CFM/100 ft<sup>2</sup>)  
 Post construction (must be ≤ 4.0 CFM/100 ft<sup>2</sup>)

**Test Result:**

**System 1:**

Fan Flow at 25 Pascals (CFM25) \_\_\_\_\_ CFM      Conditioned Floor Area (CFA) served by system = \_\_\_\_\_ ft<sup>2</sup>

CFM25 / CFA x 100 = \_\_\_\_\_ CFM/100 ft<sup>2</sup>

**System 2 (if present):**

Fan Flow at 25 Pascals (CFM25) \_\_\_\_\_ CFM      Conditioned Floor Area (CFA) served by system = \_\_\_\_\_ ft<sup>2</sup>

CFM25 / CFA x 100 = \_\_\_\_\_ CFM/100 ft<sup>2</sup>

\*Note: When following the Energy Rating Index (ERI) path, a leakage to outdoors test is required per RESNET standards.



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**III. Whole-house Ventilation System Airflow Test**

**Verifier:**

Testing company: \_\_\_\_\_ Phone: \_\_\_\_\_

Tester Name (print): \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

BPI or HERS Rater certification number: BPI no: \_\_\_\_\_ HERS Rater no: \_\_\_\_\_

**Required airflow (Q):**

Infiltration credit portion of equation is optional

$$Q = .03 \times CFA + 7.5 \times (N_{br} + 1) - 0.052 \times Q_{50} \times S \times WSF$$

Required inputs:

CFA = Conditioned Floor Area = \_\_\_\_\_ ft<sup>2</sup>

N<sub>br</sub> = Number of bedrooms = \_\_\_\_\_

Optional inputs:

Q<sub>50</sub> = Blower door test result = \_\_\_\_\_ CFM50

S = Building height factor = \_\_\_\_\_

WSF = Weather and shielding factor = \_\_\_\_\_

Stories above grade plane	1	2	3
S	1.00	1.32	1.55

County	WSF
Barnstable	0.60
Berkshire	0.52
Bristol	0.54
Dukes	0.59
Essex	0.58
Franklin	0.52
Hampden	0.49
Hampshire	0.59
Middlesex	0.55
Nantucket	0.61
Norfolk	0.52
Plymouth	0.53
Suffolk	0.66
Worcester	0.59

**Required airflow (Q) = \_\_\_\_\_ CFM**

**Tested airflow = \_\_\_\_\_ CFM**  
(must be ≥ required airflow)

Fan controlled to operate continuously

**Fan efficacy:**

In-line fan (max 2.8 CFM/W)

Bathroom/utility room fan: 10-89 CFM (max 1.4 CFM/W)

Bathroom/utility room fan: 90+ CFM (max 2.8 CFM/W)

**HVI-Rated fan efficacy = \_\_\_\_\_ CFM/W**

**IV. Qualified Performance Testing Providers:**

Find qualified performance testers at:

<http://nehers.org/find-hers-rater>

<http://www.resnet.us/directory/search>

<https://bpi.org/locator-tool/find-a-contractor>